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State of knowledge of the Acotylea (Polycladida, Platyhelminthes) from the Mediterranean coasts of Spain: new records and new species

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Abstract

Along the Mediterranean coast of the Iberian Peninsula, great species diversity is thought to exist, but our knowledge of Iberian polyclads is, in fact, very limited. This study contributes to the Polycladida (Platyhelminthes) of the Iberian Peninsula, in particular those of the Mediterranean coast. Nine species, mainly new species or new records, are described. *Imogine stellae* **sp. nov.** from Mar Menor (Murcia, Spain) is described, while *I. mediterranea* Galleni, 1976 is recorded for the first time in Spain. The genus *Planocera* Blainville, 1828 within the Mediterranean basin is reviewed: *Planocera graffi* Lang, 1879 is redescribed, and its synonymisation with *Planocera pellucida* (Mertens, 1833) considered. Also, the genus *Notoplanella* Bock, 1931 is represented by two species in Spain, *N. inarmata* Bock, 1931 type species, from Formentera Island and *N. estelae* **sp. nov.**, from Mar Menor. *Trigonoporus cephalophtalmus* Lang, 1884 is rediscovered after the description of Lang (1884). *Stylochus neapolitanus* (Delle Chiaje, 1841-1844) Lang, 1884 is recorded and *S. pilidium* (Goette, 1881) is also redescribed, and *Leptoplana mediterranea* (Bock, 1913) is newly recorded for the Iberian Peninsula.

Key words: Polycladida, marine flatworms, Iberian Peninsula, Mediterranean Sea, distribution, taxonomy

Introduction

Yungia dicquemari (Risso 1818) Lang 1884 and *Thysanozoon brocchi* (Risso 1818) Grube 1840 are possibly the first reliable records for polyclads within the Mediterranean basin, although originally described within the phylum Mollusca as *Tergipes dicquemari* Risso, 1818 and *Tergipes brocchi* Risso, 1818. Shortly thereafter, Stefano Delle Chiaje (1822–1829) wrote an exhaustive study on invertebrates of the Kingdom of Naples. Several polyclad species were described, but all were included in the genus *Planaria*, which was in the order Tricladida at the time. Delle Chiaje wrote a similar study for Sicily in 1841 in which all of the described polyclad species were also included in the genus *Planaria*.

In addition to the works of Delle Chiaje, Adolf Eduard Grube (1840) produced a compilation describing marine invertebrates (mainly Actinia, Echinodermata and Vermes) of the Mediterranean and Adriatic Seas. In this work, several polyclad species belonging to the genera *Stylochus*, *Leptoplana* and *Thysanozoon* were briefly mentioned. Later, Jean Louis Armand de Quatrefages (1845) published an impressive study describing several genera including *Tricelis* Quatrefage, 1845 (currently *Cestoplana* Lang, 1884), *Polycelis* Quatrefage, 1845 (including several species that nowadays belong to other genera of Polycladida), *Prosthiostomum* Quatrefages, 1845, *Proceros* Quatrefages, 1845 (currently *Pseudoceros* Lang, 1884), *Eolidiceros* Quatrefages, 1845 (currently *Thysanozoon* Grube, 1840) and *Stylochus* Ehrenberg, 1831.

In 1884, Arnold Lang published a detailed study of polyclads from the Mediterranean Sea, particularly those found in the Gulf of Naples. Lang's study marked a turning point in the field of polyclad taxonomy, as most of his discoveries and results are still considered essential for systematic studies of this group within the Mediterranean. Subsequent studies are highly specific or restricted because only a small number of species from localised regions

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species, which is already known for both the northern and southern coasts of the Atlantic Ocean (Bock 1913, 1931), as well as some locations for Japan, has extended to include the Mediterranean Sea.

D) Species suspected to have been introduced.

This section lists the species thought to have been introduced based on their sporadic appearance and divergent sampling localities.

Notoplanella inarmata Bock, 1931

Notoplanella inarmata is known for different localities near Cape Town (Bock 1931, Day 1970, Prudhoe 1989), but it has never been captured in the Mediterranean until now. However, localities between Cape Town and the Iberian Peninsula were not sampled, therefore we cannot be certain it is an introduced species. In South Africa and Formentera, the specimens were collected by dredging (0–134 metres). This finding, together with *Notoplanella estelae* **sp. nov.**, is the first record of *Notoplanella* for the Mediterranean Sea.

Planocera ceratommata (Palombi, 1936) Faubel, 1983

Palombi (1936) originally described this species from South Africa (Still Bay) as *Planocerodes ceratommata*; Novell (2003) also cited this species for the Catalan coasts. As well as *P. ceratommata* is frequently photographed in the shores of the Mediterranean (e.g. see http://fotosubmallorca.blogspot.com.es/2010/02/opistobranquio-no-clasificado.html; http://bitxosdelmediterrani.blogspot.com/2008/10/planoceros-sp.html; http://www.cibsub.com/bioespecie_es-planocera_ceratommata-36639; http://doris.ffessm.fr/fiche2.asp?fiche_numero=1090). Although the identification is somewhat dubious, because it is only based on the external anatomy and this genus needs for the determination at species level the study of the internal anatomy.

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